

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1 is** rejected under 35 U.S.C. 103(a) as being unpatentable over Tobinaga Hideki (Japanese Patent Publication 11-143139) hereinafter referenced as Hideki, in view of Harris et al. (United States Patent 6,019,532) hereinafter referenced as Harris further in view of Hirabayashi et al. (United States Patent Publication 2003/0002908) hereinafter referenced as Hirabayashi.

3. **Regarding claim 1**, Hideki discloses a sheet feeding apparatus comprising:

4. a sheet supporting portion on which a sheet is placed (Figure 1, item 4, where the manuscript tray is considered a sheet supporting portion; also see [0014]);

5. a feeding member configured, to feed out the sheet placed on said sheet-supporting portion. (Figure 1, where pickup roller 10 is the feeding means which is positioned above the sheet supporting means 4);

9. an cover having a guide member configured to guide the sheet fed out by said feeding member, and forms a feeding path, as disclosed in [0051]-[0054], [0082]-[0083] and exhibited in figure 1.

10. a regulating portion, provided between said separation portion and said feeding means (Figure 1, item 14, and also known as the stopper claw) and being movable

Art Unit: 2625

between a regulating position in which said regulating member regulates movement of the sheet between said sheet supporting portion said separating portion and retracted position in which said regulating member does not hamper the feeding of the sheet.

(also see [0015]); a link member (42a and 40 the combination)positioned to regulate an edge of the sheet placed on the sheet supporting portion, as disclosed in [0057]-[0059], and exhibited in figures 3 and 5;

2. However Hideki fails to explicitly disclose wherein an interlocking mechanism is used to interlock the regulating portion with an opening operation of the cover wherein when the cover is opened, said regulating portion which protrudes downwardly from the guide member and is mounted on the cover is moved relative to the cover and that the interlocking mechanism move in a retracting direction from the feeding path in association with the opening operation of the cover and that the sheet feed portion pushes the top side of the sheet. However it would have obvious to one of ordinary skill in the art at the time of the invention to include such a modification to the invention of Hideki, as taught by Harris.

3. In a similar field of endeavor Harris discloses a device wherein an interlocking mechanism is used to interlock the regulating portion 105 with an opening operation of the cover wherein when the openable and closable cover is opened, said regulating portion which protrudes downwardly from the cover and mounted on the openable and closable cover is moved relative to the cover, as disclosed in column 3, lines 60-67 and that the sheet feed portion pushes the top side of the sheet, as disclosed in column 2, lines 11-21 and that the interlocking mechanism move in a retracting direction from the

Art Unit: 2625

feeding path in association with the opening operation of the cover as disclosed in column 3, lines 11-17 and exhibited in figures 1-3.

4. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include in the sheet feeding apparatus of Hideki, a regulating member which is moved by the opening of the cover wherein the link member is moved by the cover for the purpose of stopping paper jams, the device could be interfaced to another scanner/copier or fax machine and the feeder device may perform stable feeding, as disclosed in Harris column 1, lines 46-65. Also Hideki fails to disclose that the regulating portion is upwardly retracted above the guide member from the feeding path in association with the opening operation of the cover. However it would have been obvious to one of ordinary skill in the art at the time of the invention to include such a modification to the invention as taught by Hirabayashi. In a similar field of endeavor Hirabayshi discloses that the regulating portion is upwardly retracted above the guide member from the feeding path in association with the opening operation of the cover as disclosed in [0004]-[0008]. Harris also discloses this in column 3, lines 60-67. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include such a mechanism to remove the print rollers from obstructing the path in order to clear a paper jam as disclosed in [0002]-[0008].

5. **Claims 2-3, 6-12 and 15-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobinaga Hideki (Japanese Patent Publication 11-143139) hereinafter referenced as Hideki, in view of Harris et al. (United States Patent 6,019,532) hereinafter referenced as Harris, further in view of Hirabayashi et al. (United

Art Unit: 2625

States Patent Publication 2003/0002908) hereinafter referenced as Hirabayashi. further in view of Kayzuki (Japanese Patent Publication 2002-220122).

1. **Regarding claim 2**, Hideki, Hirabayashi and Harris disclose everything claimed as applied above (see claim 1), in addition Hideki discloses an apparatus wherein said link member comprises a first link member movable in operative association with the movement of said holding member, and a second link member movable in operative association with the movement of said first link member to thereby move said regulating member to said regulating position or said retracted position, and wherein a first link member (40) with a cam shape moves against a second link member (42a) where an amount of movement of said regulating member is varied by the cam shape. (see Figures 3 and 7, and [0026]-[0027]). In addition Hideki discloses wherein the regulating portion comprises a regulating member a link member connected between the holding member and the regulating member, the link member being moved by the holding member to move the regulating member, as disclosed in [0057]-[0059] and claim 1. (see Figures 3 and 7, and [0026]-[0027]).

11. **Regarding claim 3**, Hideki, Hirabayashi Harris and Kayzuki disclose everything claimed as applied above (see claim 2), in addition Hideki discloses an apparatus wherein the cam shape is such a shape that $H > h$, where H is the amount of movement of the regulating member until the feeding member protrudes downwardly from the guide member through the holding member when the feeding member feeds out the sheet, and h is the amount of movement of the regulating member after the feeding member has protruded downwardly from the guide member, as disclosed in [0026]. In

Art Unit: 2625

addition Hideki discloses a pickup driving member (33), which rotates centering on a driving shaft (34), and a cam will push up on the pickup roller (10) through the rocking member (35) and will move the pickup roller in order to ensure that the pickup roller and the stopper claw are set at a correct height ($H > h$), and reads on claimed "guide member", as disclosed in [0061], and exhibited in figure 3.

16. **Regarding claim 6**, Hideki, Hirabayashi Harris and Kayzuki disclose everything claimed as applied above (see claim 5), in addition Hideki discloses a guide member 11 which is provided above the original supporting portion and below the feeding member located at the feeding stop position as disclosed in and exhibited in figure 1. In addition claim 6 is further interpreted and thus rejected for the reasons set forth above in the rejection of claim 3.

17. **Regarding claim 7**, Hideki, Hirabayashi Harris and Kayzuki disclose everything claimed as applied above (see claim 6), in addition Hideki discloses a closing motion covering (103), which can open and close and is formed with the separation/feeding means and reads on claimed "openable and closable cover," as disclosed in [0051-0052] and exhibited in figure 1.

18. **Regarding claim 8**, Hideki, Hirabayashi Harris and Kayzuki disclose everything claimed as applied above (see claim 7), in addition Hideki discloses a spring (43) which restrains the gearing (23) and reads on claimed, "restraining portion", as disclosed in [0027] and figures 3-4.

19. **Regarding claim 9**, Hideki, Hirabayashi Harris and Kayzuki disclose everything claimed as applied above (see claim 8), in addition Hideki discloses that the closing

Art Unit: 2625

motion covering (103) opens on top of the separating portion (12) and reads on claimed “openable and closable cover,” as disclosed in [0051-0052] and figure 1.

20. **Regarding claim 10** Hideki, Hirabayashi Harris and Kayzuki disclose everything claimed as applied above (see claims 4-9), in addition Hideki discloses an image forming portion for forming an image on the basis of image information read by said image reading means, as disclosed in [0001].

21. **Regarding claim 11**, Hideki, Hirabayashi Harris and Kayzuki disclose everything claimed as applied above (seem claim 4), in addition Hideki discloses the apparatus wherein the link member (42a and 40) or the holding member 33a is provided with a second cam shape, wherein the guide member is provided above the original supporting portion 4 and below a position of the feeding member 10 when the holding member is located at the feeding stop position (the claw is up) as exhibited in figure 1, wherein the second cam shape is such a shape that an amount of movement of the regulating member (the claw) with respect to the amount of movement of the holding member 33 until the feeding member is protruded downwardly from the guide member when the feeding member feeds out the original is larger than an amount of movement of the regulating member (14) with respect to an amount of movement of the holding member 33 after the feeding member is protruded downwardly from the guide member as exhibited in figure 3.

21. **Regarding claim 12**, Hideki, Hirabayashi Harris and Kayzuki disclose everything claimed as applied above (seem claim 4), in addition Hideki discloses an apparatus wherein the holding member and the regulating member are provided on the openable

Art Unit: 2625

and closable cover; and wherein the holding member is moved with respect to the openable and closable cover so that the relative positions of the openable and closable cover and the holding member are changed, and the link member acts on the openable and closable cover so that the regulating member is moved to the retracted position by the movement of the holding member with respect to the openable and closable cover in association with the opening operation of the openable and closable cover as disclosed in [0051]-[0055] and exhibited in figure 1.

6. **Regarding claim 13**, Hideki, Hirabayashi Harris and Kayzuki disclose everything claimed as applied above (see claim 1) In addition Hideki discloses a sheet feeding apparatus comprising: a sheet supporting portion on which a sheet is placed (Figure 1, item 4, where the manuscript tray is considered a sheet supporting portion; also see [0014]); a feeding member disposed, above said sheet-supporting portion, for feeding out the sheet. (Figure 1, where pickup roller 10 is the feeding means which is positioned above the sheet supporting means 4); a separating portion for separating the sheet fed out by said feeding member and feeding the sheet one by one (Figure 1, items 11-12); an openable and closable cover having a guide member for guiding the sheet fed out by said feeding member, as disclosed in [0051]-[0054], [0082]-[0083] and exhibited in figure 1; a regulating member provided between said separation portion and said feeding means (Figure 1, item 14, and also known as the stopper claw) and being movable between a regulating position in which said regulating member regulates movement of the sheet between said sheet supporting portion said separating portion and retracted position in which said regulating member does not hamper the feeding of

Art Unit: 2625

the sheet. (also see [0015]); and a link member (42a and 40 the combination) which is moved by a manual opening movement of the openable and closable cover to move the regulating member to the retracted position when the holding member moves the feeding member to the feeding position and the link member is moved by the holding member to move the regulating member to the regulating position when the holding member is moved to the feeding stop position, as disclosed in [0057]-[0059], and exhibited in figures 3 and 5;

7. However Hideki fails to explicitly disclose that the regulating member is moved by the opening of the cover wherein the link member is manually moved by the opening movement of the openable and closable cover. However it would have obvious to one of ordinary skill in the art at the time of the invention to include such a modification to the invention of Hideki, as taught by Kazyuki.

8. In a similar field of endeavor Kazyuki discloses a device wherein the regulating member 21 is moved by the opening of the cover wherein the link member 22 is manually moved in accordance with the cover, as disclosed in [0020], [0027] and exhibited in figure 4.

9. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include in the sheet feeding apparatus of Hideki, a regulating member which is moved by the opening of the cover wherein the link member is moved by the cover for the purpose of stopping paper jams, the device could be interfaced to another scanner/copier or fax machine and the feeder device may perform stable feeding, as disclosed in Kayuki [0002] and [0027].

Art Unit: 2625

10. **Regarding claim 14**, Hideki, Harris Hirabayashi and Kayzuki disclose everything claimed as applied above (seem claim 13), in addition claim Hideki discloses that the link member and regulating member are mounted on the cover, and that the link member is move in respect to the opening and closing of the cover, so that the regulating member is moved as well. (being instructed by the controller), as disclosed in [0051]-[0054], [0082]-[0083].

11. **Regarding claim 15**, Hideki, Harris Hirabayashi and Kayzuki disclose everything claimed as applied above (seem claim 13), in addition Hideki discloses that the device is connected to an image reading unit to read an image of an original and where the image reading unit (in the copier) reads the image of the original fed by the sheet feeding apparatus, as disclosed in [0002].

12. **Regarding claims 16-17**, Hideki, Hirabayashi Harris and Kayzuki disclose everything claimed as applied above (seem claim 1-3, 6-12 and 15). Further Harris discloses wherein the regulating portion is movable between a regulating position, in which said regulating portion regulates movement of the sheet between said sheet supporting portion and said separating portion, and a retracted position in which said regulating portion does not hamper the feeding of the sheet, as disclosed in column 1, lines 11-25

13. wherein the interlocking mechanism has a holding member configured to hold the feeding member for rotation, said holding member being movable between a feeding position in which said feeding member is in contact with the sheet supported by the

Art Unit: 2625

sheet supporting portion and a feeding stop position in which said feeding member is out of contact with the sheet, as exhibited in figure 2,

14. wherein when said holding member moves from the feeding stop position to the feeding position, said holding member moves said regulating portion from the regulating position to the retracted position, and

15. wherein when said cover is opened, said regulating portion mounted on the cover is brought into contact with said holding member so that said regulating portion is moved with respect to said cover in a retracting direction from a feeding path, the feeding path being formed by the guide member, as disclosed in column 3, lines 61-64 and column 4, lines 1-25. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include in the sheet feeding apparatus of Hideki, a regulating member which is moved by the opening of the cover wherein the link member is moved by the cover for the purpose of stopping paper jams, the device could be interfaced to another scanner/copier or fax machine and the feeder device may perform stable feeding, as disclosed in Harris column 1, lines 46-65.

16. In addition claims 16-17 are rejected for similar reasons as set forth above in the rejection of claims 1-3, 6-12 and 15. Claims 16-17 disclose a similar sheet feeding apparatus as disclosed in claims 1-3, 6-12 and 15. Thus claims 16-17 are rejected.

17.

Response to Arguments

22. Applicant's arguments filed 04/28/2011 have been fully considered but they are Moot on the new grounds of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENDAN MCCOMMAS whose telephone number is (571)270-3575. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Haskins can be reached on (571)272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2625

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